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Ouyang et al.

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[54] **DIAGNOSTICS BASED ON TETRAZOLIUM COMPOUNDS**[75] Inventors: **Tianmei Ouyang**, Fremont; **Yeung Siu Yu**, Pleasanton, both of Calif.[73] Assignee: **Lifescan, Inc.**, Milpitas, Calif.[21] Appl. No.: **09/161,876**[22] Filed: **Sep. 28, 1998**[51] **Int. Cl.⁶** **C12Q 1/32**; C12Q 1/54;
G01N 33/49; G01N 33/52[52] **U.S. Cl.** **435/26**; 435/14; 435/287.7;
435/287.8; 435/962; 435/970; 436/110[58] **Field of Search** 435/26, 14, 287.7,
435/287.8, 962, 970; 436/110[56] **References Cited****U.S. PATENT DOCUMENTS**4,803,158 2/1989 Shigeta et al. 435/25
5,510,245 4/1996 Magers 435/26**FOREIGN PATENT DOCUMENTS**

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[57] **ABSTRACT**

A reagent is suitable for measuring the concentration of an analyte in a hemoglobin-containing biological fluid, such as whole blood. The reagent comprises dehydrogenase enzyme that has specificity for the analyte, NAD or an NAD derivative, a tetrazolium dye precursor, a diaphorase enzyme or an analog thereof, and a nitrite salt. The reagent causes dye formation that is a measure of the analyte concentration. The nitrite salt suppresses interfering dye formation caused non-enzymatically by the hemoglobin. Preferably, the reagent is used in a dry strip for measuring ketone bodies, such as beta-hydroxybutyrate.

14 Claims, 2 Drawing Sheets